

WHAT IS CLAIMED IS:

1 1. A method of providing data, said method comprising:
2 storing a first set of encryption data associated with a first data stream;
3 encrypting a first data stream having said first-level-of-encryption;
4 storing a second set of encryption data associated with a second data
5 stream;

6 encrypting the second data stream having a second-level-of-encryption,
7 said first-level-of-encryption being different from said second-level-of-encryption; and
8 utilizing a common memory to encrypt said first data stream at said first-
9 level-of-encryption and to encrypt said second data stream at said second-level-of-
10 encryption.

1 2. The method as described in claim 1 wherein said first set of
2 encryption data comprises at least one encryption key.

1 3. The method as described in claim 1 and further comprising
2 transmitting said first and second data streams to a set-top box.

1 4. The method as described in claim 3 and further comprising storing
2 a plurality of decryption algorithms at said set-top box.

1 5. The method as described in claim 1 and further comprising:
2 transmitting a first number of services in said first data stream; and
3 transmitting a second number of services in said second data stream, said
4 second number of services being different from said first number of services.

1 6. The method as described in claim 1 wherein said first-level of
2 encryption utilizes the Data Encryption Standard and wherein said second-level-of-
3 encryption utilizes an encryption algorithm different from said Data Encryption Standard.

1 7. The method as described in claim 1 and further comprising:
2 decrypting said first data stream at said set-top box; and
3 decrypting said second data stream at said set-top box.

1 8. The method as described in claim 1 and further comprising storing
2 a portion of said first set of encryption data in RAM.

1 9. The method as described in claim 1 and further comprising storing
2 a portion of said first set of encryption data in a register of a microprocessor.

1 10. A cryptography circuit comprising:
2 a memory operable to store a first set of encryption data for a data stream;
3 a reconfiguration circuit operable to reconfigure said memory such that
4 said memory stores a second set of encryption data different from said first set of
5 encryption data.

1 11. The cryptography circuit as described in claim 10 wherein said
2 reconfiguration circuit is triggered by a change in the encryption of said data stream.

1 12. The cryptography circuit as described in claim 10 and further
2 comprising a memory to store a plurality of encryption algorithms.

1 13. The cryptography circuit as described in claim 10 wherein said
2 reconfiguration circuit comprises:
3 code means for storing a second set of encryption data; and
4 code means for implementing an encryption algorithm.

1 14. A method of allocating resources comprising:
2 allocating a memory with a first set of decryption data corresponding to a
3 first-level-of-encryption;
4 receiving a first data stream having said first-level-of-encryption;
5 re-allocating said memory with a second set of decryption data
6 corresponding to a second-level-of-encryption said second-level-of-encryption being
7 different from said first-level-of-encryption of said first data stream; and
8 receiving a second data stream having said second-level-of-encryption.

1 15. The method as described in claim 14 and further comprising
2 detecting that said second-level-of-encryption of said second data stream is different from
3 said first-level-of-encryption of said first data stream.

1 16. The method as described in claim 14 wherein said allocating a
2 memory with a first set of decryption data corresponding to said first-level-of-encryption
3 comprises storing decryption key data.

1 17. The method as described in claim 16 wherein said re-allocating
2 said memory with a second set of decryption data corresponding to said second-level-of-
3 encryption comprises storing decryption key data.

1 18. The method as described in claim 14 wherein said first data stream
2 is comprised of a plurality of different services, each service encrypted at the same level
3 of encryption.

1 19. An integrated circuit comprising:
2 an input to receive data;
3 a memory to store a first set of cryptographic data;
4 a processor operable to re-allocate said memory so as to store a second set
5 of cryptographic data;
6 wherein said processor is operable to implement a plurality of
7 cryptographic algorithms.

1 20. The integrated circuit as described in claim 19 wherein said
2 cryptographic algorithms are encryption algorithms.

1 21. The integrated circuit as described in claim 19 wherein said
2 cryptographic algorithms are decryption algorithms.

1 22. A set-top box apparatus comprising:
2 an input to receive a data stream;
3 a processor coupled to said input;
4 a memory coupled to said processor configured to store a first set of
5 decryption data;
6 code for use by said processor that allows said processor to reconfigure
7 said memory with a second set of decryption data.

1 23. A method of providing encrypted data, said method comprising:
2 providing a first set of services;
3 encrypting at least one of said services from said first set of services at a
4 first-level-of-encryption;
5 combining the first set of services into a first data stream;

6 transmitting from a headend to a set-top box said first data stream;
7 storing a first set of decryption keys associated with said first-level-of-
8 encryption in an integrated circuit in said set-top box, said first set of keys corresponding
9 to the decryption algorithm for the first-level-of-encryption;
10 decrypting said first data stream;
11 providing a second set of services;
12 encrypting at least one of said services from said second set of services
13 with an encryption algorithm different from said first-level-of-encryption;
14 combining the second set of services into a second data stream;
15 formatting said second data stream;
16 transmitting from said headend to said set-top box said second data stream;
17 storing a second set of decryption keys associated with said second-level-
18 of-encryption in said integrated circuit in said set-top box;
19 storing a plurality of decryption algorithms in said set-top box; and
20 decrypting said second data stream.